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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,348	04/18/2001	William A. Koehring	N1239-009	8755

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JONDLE & ASSOCIATES P.C.
9085 EAST MINERAL CIRCLE
SUITE 200
CENTENNIAL, CO 80112

EXAMINER

IBRAHIM, MEDINA AHMED

ART UNIT	PAPER NUMBER
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1638

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DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/836,348

Applicant(s)
KOEHRING

Examiner
Medina Ibrahim

Art Unit
1638



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 2, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 34-47 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 38-47 is/are allowed.
- 6) ☒ Claim(s) 34-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other: |

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DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicants' response filed 4/02/03 in reply to the Office action mailed 01/02/03 and amendment B have been entered. Claims 12-17, 19, 26-27 and 30 have been cancelled. New claims 34-47 have been added. Therefore, claims 1-11 and 34-47 are pending and are under examination.

All previous rejections and objections not stated below have been withdrawn.

New Matter

Claims 34 and 35 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims recite a hybrid corn seed wherein "fifty percent of its genetic material originates from the pollen of claim 3 " or "from the ovule of claim 4". However, the recitation "fifty percent of its genetic material" has no basis in the specification or in the claims as originally filed. Therefore, the phrase "fifty percent of its genetic material" is considered to be a new matter. Applicant is required to delete the new matter since it has no basis in the specification or in the claims as originally filed.

Claim Rejections - 35 USC § 112

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1. Claims 34-37 are rejected under 35 U.S.C. 112, **second** paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 34 and 35 are indefinite in the recitation of a "genetic material". The specification fails to describe the phrase, and hence, what is encompassed by the claims is unclear.

Claim 36 is indefinite in the recitation of "corn endosperm with improved nutritional quality". The specification fails to describe what constitutes an "improved nutritional quality", and hence, the metes and bounds of the claims are unclear. Dependent claim 37 is included in the rejection.

Written Description

Claims 34-37 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The rejection is repeated for the reasons as set forth in the last Office action mailed 01/02/03, for cancelled claims 12-16. Applicant's response filed 04/02/03 has been considered but are not deemed persuasive.

Applicant's arguments are basically the following: due to the homozygous state of inbred parental lines, the cross between two different inbred parental lines will result

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in F1 hybrid which will contain fifty percent (50%) of the genome of each inbred parental line. And since a genotype is expressed through a phenotype, both the phenotypic and genotypic characteristics of F1 hybrid are predictable. Applicant states that as long as the homozygosity of the parental lines is maintained, the resulting hybrid cross will be stable. Applicants finally argue that the Tables 1-3 on pages 32-33 of the instant specification show data on several hybrid combinations of RAA1 as compared to other corn hybrids, which are sufficient to describe the hybrid seed of claims 34 and 35. Therefore, Applicants urge that the rejection be withdrawn (pages 3-7 of the response).

Examiner responds that the rejected claims are not drawn to inbred corn lines that are self pollinated or F1 hybrid produced from the cross of two known inbred parental lines. The rejected claims are directed to a hybrid seed having fifty percent of its genetic material from the plant of the inbred line RAA1, and the other fifty percent of its genetic material is from an unknown inbred corn plant. The genotypic or phenotypic description of the second half of the genetic material of the claimed F1 hybrid plants is not known. In addition, since each parent line contributes a set of alleles and these two sets of alleles interact in a variety of ways (influenced by the environment) to determine the phenotype of the progeny, one cannot predict how the genes of the known parent RAA1 will affect the phenotype of the F1 hybrid. It is not known how the known (fifty percent) genotype would react with the environment or with other genes in the genome.

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The specification, page 3, lines 6-16, discusses the complexity of inheritance and states " (t)he inbred lines which are developed are unpredictable. This unpredictability is because the breeder's selection occurs in unique environments, with no control at the DNA level (using conventional breeding procedures)..... A breeder of ordinary skill in the art cannot predict the final resulting lines he develops." The specification further states "(t)he same breeder cannot produce the same line twice by using the exact same original parents and the same selection techniques". Therefore, it is likely that F1 hybrids produced from each cross with RAA1 may be genetically distinct. Therefore, a substantial variation in phenotypes and/or genotypes is expected among F1 hybrids.

With respect to hybrid plants shown in Tables 1-3, it is noted that the claims are not limited to these hybrid plants/seed but encompass all hybrid seeds produced by crossing the plant of RAA1 with any and all second parents which are not described. Ther hybrid plants/seed of Tables 1-3 are not a representative species of the claimed genus because a substantial variation in phenotypic and/or genotypic characteritics is expected among the F1 hybrids produced from crossing RAA1 with any other corn plants, as discussed above. Therefore, the description of the genotype of a first parent by deposit, along with a description of the phenotypic characteristics of said one parent is insufficient to describe a hybrid produced by crossing said first parent with

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any and all second parents which are not described. Therefore, the rejection is maintained.

Regarding claims 36-37, Applicant has not described the broad class of transgenes that confer any and all types of improved endosperm nutritional quality, and therefore, one of skill in the art would not know that Applicant was in possession of a corn plant with improved nutritional quality at the time of filing. Consequently, the written description requirement is not satisfied.

Remarks

Claims 1-11 and 38-47 are allowable.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Papers relating to this application may be submitted to Technology Sector 1 by facsimile transmission. Papers should be faxed to Crystal Mall 1, Art Unit 1638, using fax number (703) 308-4242. All Technology Sector 1 fax machines are available to receive transmissions 24 hrs/day, 7 days/wk. Please note that the faxing of such papers must conform with the Notice published in the Official Gazette, 1096 OG 30, (November 15, 1989).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Medina A. Ibrahim whose telephone number is (703) 306-5822. The Examiner can normally be reached Monday -Tuesday from 8:00 AM to 5:00 PM and Wednesday-Thursday from 9:00AM to 3:00PM

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amy Nelson, can be reached at (703) 306-3218.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0196.

May 27, 2003

mai

A handwritten signature in black ink, appearing to read "Amy Nelson", is located in the lower right portion of the document.